PHY BASELINE PROPOSAL AD HOC MINUTES - unapproved
3 April 2014

Welcome
From the minutes of the November Task Force Plenary meeting:

The Chair then chartered a PHY proposal ad hoc, chaired by George Zimmerman, with the following charter/objectives:

- Identify elements necessary to form a baseline proposal
    o Signaling bandwidth (bounds)
    o Modulation, EQ, coding, etc.

Participants are encouraged to review IEEE meeting guidelines available at the following URL -
https://development.standards.ieee.org/myproject/Public/mytools/mob/preparslides.pdf
The minutes for the meeting, organized as the agenda follow:

10AM Pacific Time meeting start
George Zimmerman, of CME Consulting, affiliated with Commscope & Aquantia, Chair of the ad hoc, called the meeting to order.

1. Roll call : The Chair Requested attendees to please send an email indicating your attendance, employer and affiliation to mailto:george@cmeconsulting.onmicrosoft.com?subject=802.3bq PHY ad hoc attendance 3Apr 2014
    Meeting attendance and affiliation are below: (affiliation & employer are the same unless indicated as employer / affilation)

    Anna An – Foxconn/FIT
    Jerry Chiang – Foxconn/FIT
    David Chalupsky – Intel
    Jerry Chiang – Foxconn/FIT
    Pete Cibula – Intel
    Chris DiMinico – MC Communications / Panduit
    Fred Fons – Foxconn/FIT
    Dave Jeskey - Sentinel
    Wayne Larsen – Commscope
    Rich Mellitz – Intel
    Dieter Schicketanz – Consultant / Leoni-Kerpen & Reutlingen University
    Masood Shariff – Commscope
    Tom Souvignier – Broadcom
    Sterling Vaden – Vaden Enterprises / Vaden Enterprises
    Paul Vanderlaan – Berk Tek
    Paul Wachtel – Panduit
    Peter Wu – Marvell
    George Zimmerman – CME Consulting / Aquantia & Commscope
2. Reminder of IEEE patent policy
    www.ieee802.org/3/patent.html

At 10:06 AM the Chair asked if there were any individuals on the call who were unfamiliar with the patent policy, and there were no responses heard. The Chair reminded all to review their obligations under the policy at the link above.

3. Housekeeping

The agenda, emailed to the reflector was reviewed, and no modifications were offered.

Review & approve meeting agenda:

M: David Chalupsky

S: Chris DiMinico

Approved by voice vote without opposition

Approve minutes from 27 February 2014 meeting

http://www.ieee802.org/3/bq/public/phyproposal/PHY_BASELINE_PROPOSAL_ADHOC_MINUTES_27 Feb2014_unapproved.pdf

M: David Chalupsky

S: Chris DiMinico

Approved by voice vote without opposition

4. Old business from previous ad hoc meeting:

The Chair reviewed the action items discussed at the previous meeting:

The following future contributions were planned in February and are still outstanding:

− Cable bending - End user inputs – (Dave C./Pete C.)

The Chair entertained discussion that the cable bending might lead to a dynamics specification, and that the contribution might be heard either in this ad hoc or in the cabling ad hoc. General discussion was that this contribution was secondary to host PCB noise work that the same contributor was completing. The Chair also asked members to think about what contributions they might offer going forward, particularly considering the adopted baseline and listed potential refinement items previously discussed. See below for a possible sequencing (see, e.g., zimmerman_3bq_02_0314.pdf slide 7)

5. New business at this meeting:

Contribution from David Chalupsky, Intel, (to be) emailed to reflector: Delay Constraint Considerations for 40GBASE-T,

The contribution discussed the importance of latency and stated that by adopting 10GBASE-T PHY signaling the contributor believed we had also adopted the 25600BT delay specification from MII to MII excluding the media. He compared that favorably with 40GBASE-CR4 delay, which was specified in segments between the same two reference points, and asked the PHY vendors in the group to consider and contribute on any impacts in maintaining the same delay specification. There was some discussion that the major delay portion was signal processing delay, in addition to a non-negligible delay for the LDPC decoding (given as ~2 LDPC frames or 6400 BT). Further contributions on considerations in the delay specification would be appreciated.

Further Discussion and future roadmap

The Chair then opened the floor for discussion of any items of interest. Mr. Chalupsky requested the Chair provide some thoughts on the roadmap forward to a PHY specification, and discussion indicated that having this sequence (or a similar sequence) would be useful in

bringing us forward to a complete PHY specification for the Task Force. Mr. Zimmerman then presented his thoughts on a sequence of items to investigate and close. That sequence is repeated below for reference of the participants:

The following are likely to be done sequentially:
1. Pick 10GBASE-T baseline starting point (COMPLETED)
2. Close out noise estimates – finalize PBO (needed for FEC work)
3. Determine FEC on uncoded bits and any frame structure changes
4. Determine THP update or not, and how (best to follow FEC decision)
5. Determine startup simplifications (needs to follow THP decision)

Then these proceed in parallel with some of the later steps and each other:
6. Estimate power w/various channel models
    a. Determine what is needed in management for this.
7. Investigate PoE possibilities (needs FEC determined first, can be done in parallel with 4 – 6).

After which we can do:
8. Determine & finalize MDI needs & channel requirements (needs 6 & 7 done first)

In parallel with all the above, we can determine management and PCS/MAC interface structure per Barrass contribution

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The Chair noted that the group did not need to have proposals on a point to modify the baseline, in which case that point would remain unchanged.

In discussion, it was noted that this sequence may provide us with a schedule of topics for future ad hocs, and to drive regular progress. The Chair requested contributions on the first technical item (FEC on uncoded bits), and suggested that It would be helpful if contributions to the next meeting focused on that.

6. Next meeting time: Thursday April 17, **10AM** PST.
7. Adjournment:

Motion to Adjourn
M: Dave Chalupsky
S: Pete Cibula
Passed by voice without opposition
At 10:56AM, the meeting was adjourned.